

**REMARKS / DISCUSSION OF ISSUES**

The present amendment is submitted in response to the Office Action mailed December 7, 2010. In view of the remarks to follow, reconsideration and allowance of this application are respectfully requested.

***Claim Status***

Claims 1-13 remain in this application. Claims 1 and 11 have been amended.

***Interview Summary***

Applicants appreciate the courtesy granted to Applicant's attorney, Michael A. Scaturro (Reg. No. 51,356), during an informal telephonic interview conducted on Monday, May 10, 2010. Applicant's attorney appreciates the Examiner's willingness and cooperation in conducting the informal interview on such short notice. During the telephonic interview, Applicant's attorney provided and discussed a proposed amendment to independent claim 1. The Examiner acknowledged that the proposed amendment in light of the supporting arguments appeared to overcome the Santiago reference. The Examiner encouraged Applicant's attorney to submit the response and is willing to work with Applicant's attorney to resolve any other remaining issues which may exist to move the matter towards allowance.

***Allowable Subject Matter***

Applicant wishes to thank the Examiner for indicating that Claims 3-10, 12 and 13 are objected to but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Objections to the Abstract***

In the Office Action, the abstract of the disclosure was objected to because it exceeds 150 words. By means of the present amendment, the current Abstract has been amended as shown in the enclosed Replacement Abstract in a manner which is believed to overcome the objection. Withdrawal of the objection is respectfully requested.

***Claim Rejections under 35 USC 103***

In the Office Action, Claims 1, 2 and 11 stand rejected under 35 U.S.C. §102 (e) as being unpatentable over U.S. Patent No. 7,206,280 (“Kahn”) in view of U.S. Patent No. 7,640,446 (“Donovan”), U.S. Patent Publication No. 2004/0052269 (“Hooper”) and U.S. Patent Publication No. 2006/0087969 (“Santiago”). Applicants respectfully traverse the rejections.

Independent Claim 1 has been amended herein to better define Applicant’s invention over the combination of Kahn, Donovan, Hooper and Santiago. In the Office Action, the Examiner cites Santiago for curing a deficiency in Kahn, Donovan and Hooper. Specifically, the Office cites Santiago for allegedly teaching -

.... “node circuits (22) being arranged to decide whether to forward or discard each message dependent on a measure of seniority of the message in its particular stream, each particular node circuit being arranged to prevent forwarding of more junior message in the particular stream for which insufficient resources (20) are left because of forwarding of a more senior message from another stream from the particular node circuit (22)....”

The Office cites Santiago at Par. 61 - 63 for allegedly teaching this element of claim 1.

[0061] The present invention provides such a system and method, and provides for hierarchical policing of a data stream. **The data stream may be parsed or otherwise classified into one or more traffic flows, and each flow may be parsed or otherwise classified into subflows.** The different subflows may be associated with different priority levels, so that some subflows have a lesser likelihood of being discarded or being marked for discarding (or other traffic policing function) than other subflows of the same flow. **Thus, during periods of high transfer rates from a flow, the allocation of remaining bandwidth for that flow will be biased towards packets associated to subflows of higher priority.**

Applicants respectfully submit that Santiago does not teach the claim 1 element recited above for at least the following reasons. First, Santiago discloses a single stream (See par. 61 of Santiago) while Applicants invention is directed to multiple streams (See claim 1 which recites in relevant part – *a plurality of data processing units (10) contained on the integrated circuit, interconnected by the network (12), and arranged to send streams of messages concurrently through the network (12), each stream comprising messages that occupy shareable resources (20)*)

*in the network (12) in a periodically repeating selection of successive time-slots, a period of repetition (P) being the same for all the streams)*

Second, Santiago employs a contention resolution scheme, only during periods of high transfer rates. See Santiago at par. 13 which recites in relevant part, “*Thus, during periods of high transfer rates from a flow, the allocation of remaining bandwidth for that particular flow may be biased towards packets associated with subflows of higher priority.*” In contrast to Santiago, Applicant’s invention employs a contention resolution scheme on a continuous basis without regard to periods of low and high transfer rates.

Third, it is respectfully submitted that the contention resolution scheme taught in Santiago is fundamentally different from the contention resolution scheme of the invention. Specifically, Santiago performs contention resolution by allocating remaining bandwidth to subflows (of the same stream) having higher priority. See Santiago, par. 35, which recites in relevant part, “*The subflows may be further classified into additional subflows. Thus, during periods of high transfer rates from a flow, the allocation of remaining bandwidth for that flow will be biased towards packets associated to subflows of higher priority.*” In contrast to Santiago, the contention resolution scheme of the invention operates according to a fundamental and novel rule that recites - once an initial message has been forwarded from a node circuit, it is ensured that all subsequent messages will be forwarded from that node circuit, since newly arising periodic streams that contend for resources an integer number of network periods later will always be less senior. A node circuit forwards a message from a particular stream only if messages with higher seniority from previously started streams leave sufficient resources. Otherwise the message is not forwarded. It is respectfully submitted that there is no decision process in the contention resolution scheme taught in Santiago regarding whether or not a stream having a higher priority leaves sufficient resources. Neither is there any assurance provided in Santiago regarding once an initial message has been forwarded from a node circuit, it is ensured that all subsequent messages will be forwarded from that

node circuit, since newly arising periodic streams that contend for resources an integer number of network periods later will always be less senior. Support can be found in the specification, for example, at pages 3-4.

Accordingly, Claim 1 has been amended to now recite limitations and/or features which are not disclosed by Santiago. Therefore, the cited portions of Santiago do not anticipate claim 1, because the cited portions of Santiago do not teach every element of claim 1. For example, the cited portions of Santiago do not disclose or suggest, *“wherein once an initial message has been forwarded from a node circuit, it is ensured that all subsequent messages will be forwarded from that node circuit”*, as recited in claim 1.

As explained above, the cited portions of Kahn, Donovan, Hooper and Santiago do not disclose or suggest each and every element of claim 1. Thus, the cited portions of Kahn, Donovan, Hooper and Santiago, individually or in combination, do not disclose or suggest, *“wherein once an initial message has been forwarded from a node circuit, it is ensured that all subsequent messages will be forwarded from that node circuit”*, as recited in claim 1. Hence, claim 1 is allowable. Accordingly, claim 2 is also allowable, at least by virtue of its dependency from claim 1.

Independent Claim 11 recites similar subject matter as Independent Claim 1 and therefore contains the limitations of Claim 1. Hence, for at least the same reasons given for Claims 1, Claim 11 is believed to recite statutory subject matter under 35 USC 103(a).

### **Conclusion**

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-13 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Mike Belk, Esq.,

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Respectfully Submitted,



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